Canadian Blood Services
TRACE LINE® Phase II
Manitoba Pilot

Date: 2010 11 03
Presented by: Robert Fallis
What Will be Presented Today?

• What is TRACE LINE®
• Current Situation with TRACE LINE® Implementations
• Conceptual Solution for Manitoba
• Principle of Remote Electronic Crossmatching
• Software General Features
• Benefits
• Expected Hospital Impacts Phase II
• Where we are today with Phase II
What is TRACE LINE®

• TRACE LINE® is a software developed specially for small and large scale hospital transfusion service and perinatal testing laboratories

• TRACE LINE® is FDA 510(k) licensed (US)

• Vendor: MAK-SYSTEM Corporation International Group (Paris France, dedicated Blood Bank supplier for 26 years)

• Used by 350 hospitals in at least 10 different countries

• 84 hospital use TRACE LINE® Software in Quebec

• Finland, Scotland and Florida Blood Services have implemented TRACELINE® with similar configuration requirements for Manitoba
Current TRACE LINE® Implementation Progress

- Joint funding and a cost sharing agreement obtained for a single, computerized laboratory information system for Manitoba and British Columbia, Alberta, and Saskatchewan

- TRACE LINE® has been implemented at Alberta, Saskatchewan and Manitoba Canadian Blood Services sites. British Columbia will be implemented 2010-11-22

- Phase I is managed by Canadian Blood Services and implemented according to Canadian Blood Services Project Management Life Cycle Process
TRACE LINE® Phase II Project

- This will be a joint effort between Manitoba Health, Diagnostic Services Manitoba and Canadian Blood Services

- Managed by Canadian Blood Services according to Canadian Blood Services Project Management Life Cycle Process

- In 15 months from project kick off (January 2011), TRACE LINE® software will be implemented at three (3) Manitoba Hospital pilot sites (Brandon, Health Sciences Centre and Selkirk)

- The TRACE LINE® software will replace existing manual systems for blood component and derivative inventory management
# Phase II Timelines

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<th>Milestones</th>
<th>2010_11</th>
<th>2011_12 Fiscal Year</th>
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<tr>
<td>Approval to Proceed</td>
<td>Jan</td>
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<td>Project Initiation</td>
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<td>Project Close-Out</td>
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2010-11 2011-12 Fiscal Year
Conceptual Solution for Manitoba’s Central Transfusion Service

Canadian Blood Services Winnipeg, Manitoba Health and Diagnostic Services
Manitoba identified the following requirements for the new system:

• Linkages between Canadian Blood Services Winnipeg and selected Manitoba hospitals (all on same system)

• Track, store and have patient antibody and special needs information available to all linked hospitals in real time

• Perform electronic crossmatch and issuing of blood products at hospital sites (inventory at hospital sites)

• Provincial data bank to facilitate regional utilization reviews in real time

• Combined perinatal and crossmatch transfusion patient database for consistent patient management
Manitoba Centralized Transfusion Service
TRACE LINE® Connection

Winnipeg Canadian Blood Services Central Site

- Bi-directional LIS connection
- Samples

Westman Regional Lab Brandon Crossmatch Site

Health Sciences Centre Pilot (Stock Inventory)

Selkirk General Hospital (Stock Inventory)
Principle of Remote Electronic Crossmatch

Hospital Blood Bank

Blood Tags → Blood Bag → Trace Line Link → Issue Component In Trace Line → Issue Product

Winnipeg Centre

Sample → Testing → Trace Line
Trace Line® Features

• Automated verification that PHIN number entered correctly

• Advanced Electronic Notification (AEN) of inventory in route to hospital location
  ▪ Eliminates manual entry of inventory being received

• Automated inventory tracking and utilization reports

• Built in safeguards to avoid issuing of wrong product types to patients
Trace Line® Features

• Assignment of blood components largely completed by bar code scanning

• Issuing blood components largely completed with barcode scanning

• Automated faxing of test results from Canadian Blood Services to hospital or clinic sites

• Bi-directional interface to automated testing equipment (Brandon)

• Ability for electronic transfer of blood products between hospital sites to reduce documentation
Phase II Trace Line®
Implementation Benefits

• The implementation of TRACE LINE® in Manitoba will create a transfusion registry for the province which will greatly enhance the ability to forecast demand for blood products and derivatives for the province.

• Blood products will be stored at hospital sites where it is required, reducing ‘emergency’ transportation costs.
Phase II Trace Line® Implementation Benefits

- Reduce the discard rate of blood products
- Ability to produce physician utilization reviews by Medical Service
- Reduction in medical technologist time in performing labour intensive manual data entry of test results and record keeping
- Standardized documentation processes across all sites
### Pilot Quantifiable Benefits

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<th>Benefit</th>
<th>Measure</th>
<th>Expected Improvement in Performance</th>
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<tr>
<td>Reduction in Manitoba hospital red cell discards</td>
<td>Average discard rate</td>
<td>Reduce the discard rate in Selkirk from 26% to the provincial average of 8%.</td>
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<tr>
<td>Reduce crossmatch to transfusion ratio <em>(increase red cell product utilization efficiency)</em></td>
<td>Crossmatch/Transfusion Ratio</td>
<td>For the Health Science Centre pilot reduce the C/T ratio of 2.23 to 2:1</td>
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<td>Reduce the need for red cell and platelet products to be returned to the CBS Crossmatch for re-issue</td>
<td>Platelet and Red Cell Inventory</td>
<td>Reduce the current return rate of red cells from 50% to 20% at the Health Sciences Centre</td>
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Impact on Stakeholders Phase II

- Pilot Hospital Clinical Units
  - Derivative products will require confirmation of transfusion
  - Introduction of computer generated reports in Brandon

- Pilot Hospital Laboratories
  - Staff will be going from manual to a computer platform
  - Improved inventory management and changes to operational process
  - New operating procedures associated with electronic crossmatching, remote tag issuance, inventory management
  - Inventory of blood products will be at hospital sites.
  - Space requirements for hardware (PCs, printers, etc)
Impact on Stakeholders Phase II

- Physicians located at Pilot Sites
  - Improved Turn Around Time for the delivery of blood components when type and screen completed
Where are we today with Phase II?

• Business Case written and approved to proceed
• Stake holder support confirmed
• CBS Project staff have been recruited and assigned to Pilot site location
• Communication of the Pilot Project to key stake holders
What happens after the Pilot?

• Roll out of Trace Line® to 15 other sites around the Province

• Investigate the feasibility of implementing Transfusion Monitoring Module to complete the vein to vein process

• Investigate the implementation of other available modules such a Hemovigilance